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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/041,638 | 01/10/2002 | Jun Iisaka | 111710 | 7499 |

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EXAMINER

TRINH, MINH N

ART UNIT PAPER NUMBER

3729

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/041,638

Applicant(s)

IISAKA ET AL.

Examiner

Minh Trinh

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. "An" (claims 2-21, line 1) should be changed to:--The--, to reflect the dependent claim formats. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention. For the following reasons:

The scope of claims 1-21 is not clear because claims is directed to an electric mounting system (see claim 1, line 1) and evidence shows that claim fail(s) to correspond in scope with that which applicant(s) regard as the invention because the limitation recites "an object" (claim 1, line 18) is not part of the claimed structure and seem not further limit the claimed apparatus.

"at a position at which said image taken device is not substantially influenced by the thermal, " is unclear in that it is not known what exactly applicants referring as "a position . . . ". This limitation is not positive structure limitation.

It is also noted that the claimed "a thermal expansion" and the functionally associated thereof. For example material properties (or thermal expansion) of the frame or movable portion of holder, etc., which have very little effect on the claimed mounting

Art Unit: 3729

apparatus because the system equipped with a device such as image that would detect the movement of the part during the process including the thermal expansion as necessary. It appears that applicant's invention may be more appropriately claimed as a method for mounting with respect to the thermal expansion of the part and the frame and applicant may wish to pursue such avenue

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-21, as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant Admitted Prior Art [APA] (see Applicants' Specification pages 2-7) in view of JP 5-241660, hereinafter JP '660.

APA as discussed in page 2, paragraph 0004 discloses a mounting apparatus comprising: a main body structure; a driver device; a movable portion movable relative to said main body structure; a motion transmitting member disposed on said main body

structure and linearly extending in one direction (see the discussion in page 2, lines 2-17); an image taking device fixedly disposed on the other of said main body structure (see paragraph 0007, lines 5) and said movable portion and operable to take an image of said object, said object and said image taking device being positioned relative to each other such that an error of relative positioning of said object and said image taking device, which is detected on the basis of the image of said object taken by said image taken device (see the discussion in page 3, paragraph 0007, noting the component of APA is represented the object as claimed by the application); and a controller operable to apply a drive signal to said drive device (see the discussion in page 4, lines 5-22) for controlling a position of said movable portion in the direction of said linear motion, said controller determining said drive signal on the basis of said image of said object taken by said image taking device, so as to reduce an amount of influence of said movable portion in the direction of said linear motion (see the discussion in page 4, about lines 5-22). APA, as relied and discussed above does not clearly teach the concept of a thermal expansion including the thermal expansion of said motion transmitting member causes a corresponding positioning error of said movable portion in the direction of said linear motion of the electric component mounting system. The JP '660 teaches the concept of calibration measure the thermal expansion causes by the thermal expansion of the transmitting member (or ballscrew, see paragraph 0011, of the Translation) for controlling of the positioning error and the wearing of the part due to the thermal expansion (see paragraphs 0012 and 0018 of the translation); and the limitation recites in claim 3. Therefore, it would have been obvious to one ordinary skill in the art at the

Art Unit: 3729

time the invention was made to employ the teaching of calibration measure thermal expansion associated with the mounting system as taught by JP '660 on to the invention of APA in order to obtain a desired mounting system which can control and position the part accurately and efficiently. Note that APA's a component holder arranged to hold an electric component as discussed in paragraph 0005 is read as "an object fixedly disposed on one of said main body structure and said movable portion" of the application.

As applied to claims 2 and 21, APA teach the image taking device being fixedly on the main body structure and the JP'660 teaches the thermal expansion and its application purpose. It would have been an obvious matter of design choice to choose any desired position including the position of the image device is not influenced by the thermal expansion (see claim 2) since applicant has not disclosed such position is critical, patentably distinguishing features and it appears that the invention would perform equally well with the arrangement where the image taking device being fixedly on the main body structure as discussed by the APA reference (see APA, paragraph 0007, line 5).

Limitation of claim 3 is also met as discussed above.

As applied to claims 4-11 and 20, noting APA teach the concept that associated with a plurality of movable portions in the form of a component holder as recited in claim 4 (see APA's paragraph 0007); and the limitations of each of claims 5-11 are also met as the discussion above (refer APA's paragraph 0007+). Note that the "object" as

recited in the claims is intended use structure. This "object" does not further limit the claimed structure (refer to the discussion in paragraph 3 above).

Limitations of claims 12-19 are directed to the "object". It would have been an obvious matter of design choice to choose any desired object (component) associated with the claimed mounting structure (see claims 12-19) since applicant has not disclosed the particular "object" is critical, patentably distinguishing features and it appears that the invention would perform equally well with the combination prior art teachings as discussed above (see APA, paragraph 0007, line 5, and Figs. 1 and 3 of the JP '660).

Prior Art References

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art teachings of mounting system and image taken device for detecting positioning error during the process.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Trinh whose telephone number is (703) 305-2887. The examiner can normally be reached on Monday -Thursday 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached

Art Unit: 3729

on (703) 308-1789. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.



Examiner Group 3729

Mt
9/30/2003